

THE HEALTH OF DUBLIN.

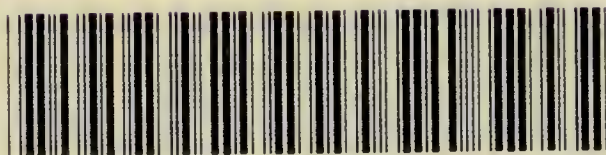
BY

FREDERIC W. PIM.

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PREVENTABLE DISEASES:

WHY ARE THEY NOT PREVENTED?

BEING

A N A D D R E S S

*Delivered at the Annual General Meeting of the Dublin Sanitary
Association, 30th March, 1892.*

BY

F R E D E R I C W . P I M ,


P R E S I D E N T O F T H E A S S O C I A T I O N .



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ADDRESS.



In his opening Address, as President of the Congress of Hygiene, which met in London last August, the Prince of Wales asked this question—"Where could we find a family which has not, in some of its members, suffered from Typhoid fever, or diphtheria, or others of those illnesses which are especially called preventable diseases? Where is there a family in which it might not be asked 'if preventable, why not prevented?' "

Commenting on this question, the *Saturday Review* of August 22nd, in an article headed "Scientific Ignorance," says, "The answer was strewn broadcast over the meetings—'because we don't know enough about them!'"

To echo the Prince of Wales' question is the first step in the A B C of sanitary science, but we may accept the answer of the *Saturday Review* as containing at least a very large measure of truth, without losing our faith in science, or despairing of sanitary progress. Our ignorance is still vast, yet we have learned some truths with certainty. We have not prevented all preventable diseases; but we have done something to lessen and to mitigate them.

I have long thought it unfortunate that Sanitarians have adopted the term "preventable," as synonymous with "Zymotic" diseases: the word implies too much, and leaves us open to have put to us, scoffingly, the question put by the Prince of Wales seriously, "if preventable, why not

prevented?" whilst in the limited sense in which only we are justified in using the word at all, there are many other diseases which, in the present state of our knowledge, are quite as preventable as some of the zymotics.

From a lecture "On Zymotic and Preventable Diseases," delivered in this theatre, in 1873, by Dr. Grimshaw, I take the following list of the principal zymotic diseases:—fevers, diarrhœa, scarlatina, small-pox, whooping-cough, cholera, measles, erysipelas, puerperal-fever, croup, diphtheria. It is true that, with respect to most of these, we have now a considerable general knowledge of the conditions in which they are engendered, and under which they spread, and that those conditions are so far under our control that very much may be done to check their development, and to prevent their spread. In this sense, they may properly be called "preventable;" but in spite of all the researches of bacteriologists, there is not one of them of which the ultimate cause has not, as yet, so far eluded our grasp that, while we may mitigate and restrict, we can, in no wise, wholly prevent them.

There is probably no disease in regard to which we have come nearer to successful prevention than Small-pox. Those whose memory carries them back to the first half of this century, must be aware that the number of faces pitted all over with small-pox that we now see around us, is much less than it used to be; while the novels and biographies of the last century show what a scourge that loathsome disease was considered, and how the terror of it sometimes sat like a nightmare upon individuals, and even upon whole families. That Small-pox no longer decimates us, blinding or scarring those whom it fails to kill, we owe to Jenner's immortal discovery; and the almost universal application of it is at least

one achievement of the Sanitarians, on which they may fairly congratulate themselves. Vaccination has been compulsory in Ireland since 1863. The last great epidemic of small-pox occurred in 1871-72, when 1,557 persons died of this disease in Dublin. Again, in the five years 1877 to 1881, there were 1,385 deaths from Small-pox; but since the year 1881, there have been but four deaths in the Dublin registration district, and in all the rest of Ireland there have been but six deaths since 1883.

Typhus—the “Gaol-fever” of the last century—a disease almost wholly due to over-crowding, and preventable by space and ventilation, though unfortunately easily communicable by contagion, has not been stamped out; but it has been largely “prevented” by improved dwellings, and by more rational habits amongst both rich and poor, along with the enormous improvement in prison management which has taken place in modern times.

Enteric, or Typhoid, fever is known to be largely due to defective drainage. There are few diseases in which a larger proportion of the cases can be assigned, with, at least, high probability, if not with absolute certainty, to a definite cause—contamination of air or water with sewer gas from defective drains, or of food or drink with sewage matter. The proportion of deaths from this disease in Dublin is nearly twice as great amongst the well-to-do middle classes, as amongst the artisans and labouring classes. It is a notorious and undeniable fact, that the house drains of an immense proportion of the dwellings and business offices of Dublin are in a fatally defective condition. We shall not have made much progress towards the prevention of typhoid fever, until these defects have been detected and remedied.

Of the immediate sources of some other zymotics, Scarla-

tina, Measles, Croup, Diphtheria, Whooping-cough, we know less, and must, therefore, speak less positively as to modes of prevention, but, at least, something can be done, and has been done, by isolation and by disinfection of clothes and bedding, and of houses, to prevent their spread. These diseases fluctuate so much from one year to another, at times rising into epidemics, at others, temporarily, almost disappearing, that we cannot rely on the statistics of individual years as proving the effectiveness of our sanitation ; so that whilst the comparative immunity from scarlatina and measles which we have enjoyed during the past two years may be accepted as a hopeful sign, we must guard against undue discouragement, should these diseases again recur with fatal severity.

The deaths from Diarrhœa, which, in the autumn months, are far more numerous than they ought to be, will be found to occur almost wholly amongst very young children. They may be attributed, chiefly, to unwholesome food, especially milk, and may be guarded against by greater care and cleanliness, with some assistance from the City Analyst.

There is another of the diseases in Dr. Grimshaw's list in which prevention, if not absolutely perfect, has, at all events, been enormously successful. Puerperal-fever, at one time the terror of the Physician to the Maternity Hospital, from the extreme facility of its spread, and its extraordinarily fatal character, has, in modern times, partly by means of Sir Joseph Lister's antiseptic discoveries, and partly by improved sanitary practice in other ways, been reduced within very narrow bounds. A hundred years ago, according to a paper read by Dr. Priestly, in the Preventive Medicine Section of the Hygienic Congress, the mortality in maternity hospitals was 34·0 per thousand cases, of which 75 per cent., or about 25·0 per thousand, was due to this one disease. Now, the

total mortality from all causes, in such hospitals, is less than 5·0 per thousand cases; and an outbreak of puerperal fever would bring grave discredit on the hospital in which it should occur.

In the same manner, and by similar means, Erysipelas has almost entirely disappeared from the surgical hospitals, in which it was, at one time, dreaded as an intractable disease, sometimes a deadly epidemic.

The following table shews the average number of deaths from each of the principal zymotic diseases, during the five successive periods of five years each, from 1866 to 1890, as well as the actual numbers for 1891. It shows, on the whole, a fairly satisfactory progress in the direction of prevention:—

TABLE SHEWING AVERAGE ANNUAL NUMBER OF DEATHS FROM ZYMOTIC DISEASES, IN DUBLIN REGISTRATION DISTRICT, FROM 1866 TO 1891, IN FIVE PERIODS OF FIVE YEARS EACH—

	1866 to 1870	1871 to 1875	1876 to 1880	1881 to 1885	1886 to 1890	1891
Small-pox, --	6	315	277	3	—	—
Measles, --	144	103	246	214	166	5
Scarlatina, --	350	335	277	177	131	4
Diphtheria, --	23	35	32	28	26	23
Whooping-Cough	155	141	211	164	197	159
Fever, --	373	318	320	282	217	202
Diarrhœa and Dysentery, --	345	241	275	233	288	211
Cholera, --	251	6	8	6	10	5
Other Zymotics,	320	312	342	135	217	256
Total, --	1,967	1,806	1,988	1,242	1,252	865
Total Deaths from all causes—						
Yearly average --	8,210	8,400	9,745	9,821	9,539	9,195

Besides the zymotic diseases, which are ordinarily spoken of as preventable, there are several others which, if not

wholly preventable, are, at least, to a considerable extent, amenable to preventive measures, and may, by means within our reach, be appreciably mitigated.

Amongst these we may, unhesitatingly, reckon Phthisis, or pulmonary consumption, which, in 1890, carried off 1,292 persons, whilst the deaths from all the recognized zymotic diseases combined, were only 1,019.

Bacteriologists are now beginning, with some degree of confidence, to include phthisis amongst the zymotic diseases, believing that they have already identified and convicted the special "*bacillus tuberculosis*," which works the mischief. In this view, very precise recommendations for isolation of patients and disinfection have been made, which, however well-meant and conceivably efficacious, seem difficult to carry out with regard to a disease so insidious and of such protracted duration as consumption. We may, therefore, pass these by for the present, and confine our attention to those more general measures which lie in the direct line of familiar sanitary practice.

In a paper "On Special Causes of Mortality," read at the Hygienic Congress by Dr. Ogle, F.R.C.P., Superintendent of Statistics to the English General Register Office, it is shown that, whilst amongst farmers, fishermen, gardeners, and agricultural labourers, who live an open-air life, though subject to exposure to all sorts of weather, the comparative mortality from phthisis ranges only from 52 to 62; the rate amongst tailors is 144, and amongst printers 233; these classes, especially the latter, habitually working in confined, crowded, ill-ventilated, and often over-heated rooms.

Without going further into the special risks attendant on special trades, I note these facts, as indicating clearly, one direction in which measures for the prevention of pulmonary

consumption may be attempted with fair prospect of success, They seem to point, above all things, to the necessity for a plentiful supply of fresh and pure air. We can hardly hope to reduce the consumption death-rate of working printers, to the level of that of fishermen and farmers ; but we may certainly be assured that it is not inevitable that their liability to this disease should permanently continue to be nearly five times as great.

The acute Chest Diseases which attack us with so much virulence every winter, are so largely caused or aggravated by the climatic conditions of our geographical position that we cannot hope by any means to escape them ; but there can be no doubt that the same weapons with which we contend against other diseases—better dwellings, better drainage, better ventilation—will not be without efficacy against Bronchitis, Pneumonia, and Pleurisy. Rheumatism also, which, though it counts for little in the Registrar-General's returns, causes an incredible amount of suffering, and distinctly lowers the physical efficiency of a large proportion of our adult population, is undeniably fostered and aggravated by the same evil conditions against which we are contending, and is, therefore, in a considerable degree preventable, and ought to be prevented.

The foregoing brief review of the three most conspicuous and familiar classes of disease—zymoties, phthisis, and diseases of the respiratory organs—which together are responsible for nearly half our total deaths,* however superficial and imperfect, has, I think, sufficiently shown that the diseases enumerated are all, in varying degrees, but in all

* In ten years ending with 1889, the total average number of deaths was 9,863, of which 4,615 were due to the three classes of diseases referred to—viz., zymoties, 1,414 ; phthisis, 1,226 ; chest diseases, 1,975.

cases to such an extent as to justify the use of the word, —preventable,—that with some of them a very considerable degree of success has already rewarded the endeavours made to prevent them, and that with regard to all of them we may reasonably expect, by the use of means well known to us and within our reach, a still larger measure of success in prevention in the future.

There are many other diseases of the preventability of which much might be said, especially with reference to the conditions under which the employments of civilized mankind are carried on, not merely by our artisans, and labourers, but also amongst our clerks and shopkeepers, and even in the ranks of our merchants and professional classes;* but I have, perhaps, sufficiently answered the first part of our question, and may pass on to the second—being preventable, how are they to be prevented?

Rigidly enforced isolation, with prompt and unhesitating slaughter of every beast reasonably suspected of infection, has almost wholly stamped out pleuro-pneumonia in our Irish cattle; yet even these means have failed to prevent occasional sporadic outbreaks, and these means it is assuredly not open to us to employ for the eradication of the diseases of our fellow-men.

Carefully applied quarantine regulations may no doubt sometimes prevent the introduction of some specific disease of undoubtedly foreign origin, such as Yellow-fever, Asiatic Cholera, or Small-pox; but in these days of extended commerce and daily-increasing rapidity of communication with

* In ten years ending with 1889, the average annual number of deaths from diseases of the brain and nervous system were 1,439, and from diseases of the circulatory system, 606.

all parts of the inhabited world, the most carefully devised quarantine regulations are extremely liable to break down.

Much may also be done by prompt isolation through the removal of the patient to hospital, and by the effectual disinfection of furniture and clothing, to prevent those infectious diseases which are endemic amongst us from spreading into epidemics, and to this end valuable results may be hoped for from the operation of the "Diseases Notification Act," now in force in Dublin and in some of the surrounding townships.

But no system of quarantine or isolation can be relied on as more than a temporary expedient, available at a critical emergency, but wholly inefficient as a permanent preventive of diseases for which our general insanitary conditions are such as to provide a suitable *nidus* and breeding ground.

Persons of nervous temperament often resort to strange, sometimes even ludicrous, stratagems, to preserve their own persons, or those of their families, from contact with infection, when scarlatina or measles, or some other notoriously "catching" ailment is prevalent in their neighbourhood. Such action is of little more avail than that of the young soldier, who ducks when the bullets begin to whistle over his head. We cannot thus, by any individual precautions, elude the grasp of "the pestilence that walketh in darkness." To fight such a private battle, with any chance of permanent success, it would be necessary to restrict our intercourse with the world, to a degree that would make life simply not worth living. Even then, ignorance of, or inattention to, some apparently trivial circumstance, or forgetfulness of some well-devised precaution might, at any time, in a moment, frustrate all our previous vigilance. We might thus, "through fear of death, continue all our lifetime subject to bondage," and yet, perhaps, have, in the end, no compensation for an

intolerable burden. To fight with success against the common enemy, we must make common cause together, not in isolated single combats, but united in an organized campaign.

On the other hand, without the hearty co-operation of the individual citizen, the efforts of the public Administrative Authority will be of little avail. The true function of the Sanitary Authority is chiefly to provide the means by which individual action may be made effective, and to secure, as far as possible, that the intelligent exertions of the prudent shall not be frustrated by the stupidity or indifference of their ignorant or selfish neighbours. To this end, in many matters, compulsory powers are properly given to the local Authorities; but, we may be sure that, so long as private rights and personal freedom of action continue to be so highly regarded as they are in these Countries, compulsory powers can never be made to cover so wide a field as would be necessary for effectual sanitation, and that in those matters, in which the general public opinion has been brought to sanction the application of compulsory powers, those powers will be really operative only where the local intelligence is instructed, and the local feeling educated, so as to warrant the effective enforcement of them. Compulsory vaccination would not have saved us from small-pox if the anti-vaccinationists were not, fortunately, everywhere an infinitesimal proportion of the community, and the Compulsory Notification of Diseases Act will be of but little use to us in Dublin, until people in general become so imbued with a belief in the propriety of it that the Public Health Committee can prosecute those who fail to comply with its provisions, without fear of odium or unpopularity. For we must bear in mind that the person who tries to resist or evade such provisions, is just the person for whom it is necessary that they should be compulsory.

The householder who, having typhoid fever or diphtheria in his house, is anxious to have the cause of it searched out and removed, will gladly make it known without compulsion. He, on the other hand, who tries to keep it secret, most likely does so because he dreads the expense of having his drains made right, or the trouble of having his dwelling or his clothing properly disinfected.

Effective sanitation, then, depends on a due combination between private and public action, which it is the function of an Association, such as this, to promote, endeavouring, by every means in its power, to bring about an intelligent co-operation between the individual citizen and the Administrative Authority of the community of which he is a member. With this general principle in mind, let us consider some of the sanitary questions which present themselves to us in Dublin.

First of these questions, that of the Main Drainage of the city naturally suggests itself, in view of the large scheme for the purpose, which is now being promoted by the Corporation.

Of the three parts of which any system of town drainage must consist—house drains, street sewers, and general outfall—we, at present, possess in Dublin practically only one. We have an extensive and well-built system of street sewers, much of it constructed during the lifetime of this Association, on approved modern principles, and at great expense. The system will, of course, need extension from time to time, but, in the main, it may be taken as fairly sufficient for the present needs of the city. In one point, however, street sewerage is still susceptible of great improvement—Science has not yet decided in what method the ven-

tilation of sewers ought to be effected. The method now adopted of ventilating by open gratings on the surface of the street, is altogether empirical and unsatisfactory. The action of these openings must vary with every change in the direction, or in the force, of the wind, and it is doubtful whether, in many cases, they do not act as inlets by which, through defective traps and fittings, the upward suction of foul air, created by our kitchen fires, is largely fed. I am convinced that our sewers will never be effectively ventilated, without artificial means, applied on scientific principles, and regulated with as much care as the ventilation of a coal mine.

The objectionable character of our present system of Out-fall is so notorious that I need hardly dwell on it. Our principal sewers discharge their contents into the Liffey at many different points along its course, polluting the river to an extent which is rapidly becoming intolerable. How far this can be set down, as in itself a cause of disease, is a moot question ; but there can hardly be a doubt that at each flow of the tide, there must be a quantity of foul gas pent up in each sewer, and liable to be forced back into our houses, even, in some cases, at a long distance from the river, to a highly dangerous extent. At all events, public opinion has settled it that the evil is intolerable, and must be removed, particularly as the summer effluvia of the Liffey mud have made themselves so offensively patent to visitors from abroad as to have most unduly disparaged the sanitary character of Dublin in the eyes of the Civilized World, to such an extent as to amount to an actual damage to our material prosperity. Our Corporation are, therefore, only doing their duty in taking the matter up, and endeavouring to carry out a complete scheme by which the purification of the Liffey shall, once for all, be effected.

This is not a suitable occasion to discuss, nor am I qualified to pronounce upon, the merits of the particular scheme now being promoted by the Corporation. They are, no doubt, acting on the best advice at their command, and the Sanitary Association must heartily wish them success. Should the scheme prove reasonably successful as regards the city sewage, public opinion will rightly insist on the elimination also from the Liffey of the sewage of Rathmines and Pembroke, which is now discharged into the river channel by a joint outfall below the Pigeon-house.

Almost equally necessary, from a sanitary point of view, and for the re-habilitation of our credit in the eyes of the World, is a new outfall system for the sewage of Blackrock and Kingstown, for which a scheme is now being promoted by the Commissioners of Blackrock. Here, again, I express no opinion as to the plan proposed; but I am sure that if the southern shores of our beautiful bay are not, within some comparatively short time, to become deserted by all to whom a choice of residence is free, means must be adopted by both Townships, either together or separately, to put a stop to the discharge of crude sewage on the foreshore west of Kingstown Harbour, which is now taking place in yearly growing volumes. Within my own memory, the bathing, which, forty years ago, was one of the chief attractions of the district, and from which the Dublin and Kingstown Railway reaped a handsome revenue, has been completely destroyed, and the flat sands from Salthill to Sandymount are being clothed with a foul and noisome deposit which, perhaps, only the beneficent action of the east winds in spring prevents from becoming a source of fatal pestilence. It is altogether intolerable that the Kingstown Township should permanently continue to discharge

more than half its sewage in the calm and shallow waters at Salthill, and at the same time to bar the access of the Blackrock Township to the deep-water currents from which the interposition of Kingstown Harbour at present effectually cuts them off.*

At the other extremity of our drainage system, the House Connections are, in my judgment, the most pressingly dangerous blot on the sanitation of the city. Constructed long ago, before sanitary engineers existed, when architects cared only for appearance, and builders and house-holders thought of drains only as the means to convey beyond the four walls of the building, as much of the house refuse as could be got into them, the house drains of Dublin, even in our best residential streets, have almost every conceivable fault. Cases exist where the house drain has no connection with the street sewer at all; but is simply discharging its liquid

* From the Census returns it appears that whilst all the other suburbs of Dublin are increasing in population, those which are situated on the southern shores of the bay are either stationary or retrograding.

The following are the figures for 1881 and 1891 respectively :—

TOWNSHIPS.	1881.		1891.		INCREASE.		DECREASE.	
	Houses.	Popula- tion.	Houses.	Popula- tion.	Houses.	Popula- tion.	Houses.	Popula- tion.
Rathmines, --	4,305	24,370	4,826	27,796	521	3,426	—	—
Pembroke, --	3,796	23,222	3,788	24,269	—	1,047	8	—
Kilmainham,	712	5,391	979	6,519	267	1,128	—	—
Drumcondra,	862	4,878	1,281	7,624	419	2,746	—	—
Clontarf, --	867	4,210	951	5,104	84	894	—	—
Kingstown, --	3,388	18,586	3,493	17,352	105	—	—	1,234
Blackrock, --	1,608	8,902	1,587	8,401	—	—	21	501
Dalkey, --	698	3,234	715	3,197	17	—	—	37

contents into the subsoil, while itself choked with solid deposit. Many of them are not intercepted from the main sewer by any trap; but form ventilating tubes from the street sewer into the basement. Most of them are leaky. Few of them are properly laid, properly trapped, or properly ventilated. Those which are old are constructed of unsuitable materials, with wrong sections, on improper gradients—while many pretentious and expensive houses, even of quite modern erection, have drains unintelligently planned and imperfectly constructed. It is safe to say that there is hardly a house in Dublin, no matter of what rank, where the drainage has not been quite recently overhauled under competent supervision, in which there would not be found some more or less serious, if not vital fault, either of design or construction. Why need we look for recondite or mysterious causes for our typhoid fever while this one lies under our noses in every quarter of the town?

Amongst all the sanitary defects which still exist in Dublin, there is perhaps none greater than this of defective house drains, certainly none which is more easily rectified, and, in my belief, none from the rectification of which a more immediate result would be realized in the decrease of disease and death amongst us.

For the remedy of this evil the Sanitary Protection Department of our Association is expressly devised. Every one who takes advantage of the assistance which the Association thus offers to him, not only does what he can to secure the health of his own household, but does much also to lessen the liability to disease of his neighbours, and thereby to benefit the community.

In immediate connection with the question of house drains

is that of the Underground Waters, which has recently been brought afresh under public notice by Dr. Graves. As long as the principal supply of water for domestic purposes was derived from pumps, a constant circulation of the underground waters was kept up, which partly prevented them from contamination beyond a certain degree. The introduction of the Vartry water not only caused a gradual disuse of pumps so as to destroy this circulation, but also brought about an enormous increase in the flow of sewage discharged into our imperfect and leaky drains, and so tends to keep our underground waters constantly replenished with an increasing contribution of foul and noxious matter. Besides the increasing contamination from the constant percolation of sewage matter, the disuse of pumping has also very considerably raised the level of the underground waters, so that they are now much nearer the surface, and therefore much more liable to affect the condition of basements and cellars than was formerly the case. Evidence both as to contamination and as to the rise of the level of the underground water was given at the Royal Commission in 1879 by Dr. Haughton, F.T.C.D., and by Dr. Emerson Reynolds. Dr. Haughton then stated that, in Trinity College, steam pumping had been introduced, at a cost of between £300 and £400 a-year, in order to remedy the condition of the grounds and of the ground-floor rooms, which, owing to the cessation of pumping, had become "exceedingly damp and unwholesome," and I believe this pumping is still kept up with decidedly beneficial effects.

I am convinced that this matter is worthy of very serious attention. I cannot see why a system of artificial drainage by means of wind-driven pumps might not be worked at comparatively small expense. The intermittent action of the

wind would not be a material objection, and there need be no objection whatever to the discharge of the water—which, except perhaps just at first, would be almost pure—directly into the river.

Although much improvement has been effected in the Scavenging of the city, very much still remains to be done. The material daily collected by the Scavenging Department is now loaded at George's-quay, into a steam lighter, and discharged beyond Howth, into the deep sea. This is an obsolete and wasteful method, and it is to be hoped that the Corporation will, before long, carry out their intention of erecting a "destructor," by which all the refuse will be destroyed by burning. The accumulations which still remain in some of the old "scavenging depôts," should be wholly got rid of, and all the stuff collected should, without any delay, be passed through the destructor.

After all the years in which the Sanitary Association has been persistently urging the matter upon the attention of the Corporation and the Public, the enormous evil of the existence of a multitude of proprietary Slaughter-Houses in the city still remains, with its concomitant nuisances—carcasses carried about on men's heads, or piled on carts, in which the driver sits on the meat, offal carried offensively through the streets, and filth improperly discharged into the public sewers—by which every sense is outraged. The system is so wholly indefensible, from every point of view, that it seems amazing that even that great Fetish of the British Constitution—"Vested Interests"—should have been so long allowed to protect it. It is discreditable to the City of Dublin that, after ten years, our admirable Abattoir should still remain

a costly failure. The Corporation have now all necessary legal powers, and they ought to be put in force.

On this subject the *Times*, of August 11th, 1891, in a leading article on the address of the Prince of Wales to the Congress of Hygiene, remarks that—

“The weak point of English sanitary law is in respect of regulations for the slaughter of animals.”

And after contrasting the practice in Continental cities, in which “all private slaughtering is forbidden,” and commending “the more stringent regulations with regard to existing slaughter-houses, introduced by the County Council,” continues as follows :—

“What is really wanted is a sufficient amount of knowledge on the part of the public to lead to a demand for the abolition of private slaughter-houses, as dangerous nuisances, and for the establishment of abattoirs in place of them. When this demand arises, the real or fancied interests of individual butchers will be compelled to yield to the larger and more important interests of the community.”

I trust that this demand, which has so long been made by the Sanitary Association, will be pressed, until not a slaughter-house remains in the City of Dublin.

Next to the slaughter-houses come the Cattle Yards and Manure Depôts, of which there are so many in the city. It might, perhaps, be going too far to assert that no such thing as a cattle shed or dairy yard ought to be suffered to exist within the limits of the city; but I am sure that many of those that do exist, ought not to continue. At all events, none should be maintained where the site is manifestly unsuitable, through being in a thickly populated locality, or so placed that proper ventilation and drainage cannot be secured. Where no reasonable objection can be made to the

site, then provisions should be enforced for efficient drainage, without overtaxing or obstructing the public sewers, for adequate ventilation and for thorough and systematic cleaning. Such provisions, while necessary for the public health, will, in the long run, operate for the advantage of the cattle themselves, and in the true interests of their owners, and will, therefore, inflict no hardship.

Whatever allowance may be made, on the score of public convenience, for the cattle sheds and dairy yards, I have no hesitation in saying that no manure yards or depôts for the storage of offal and refuse ought to be sanctioned by the Sanitary Authority. Arrangements, whether public or private, ought to be made, and inflexibly carried out, for the regular and frequent removal of the manure and offal, which are unavoidable where animals are kept, to some less frequented places beyond the city limits, where they can be inoffensively stored pending their distribution in due season as fertilizers for the land.

I have left till the last the reform which, by the importance of the beneficial results that may be expected from it, no less than by its magnitude and the difficulty of carrying it into effect, overshadows all others—the re-building of the houses of the working classes in Dublin.

The evil state of the Tenement Dwellings of Dublin has been so often and so clearly exposed that I need not labour the case against them now. One short paragraph from the “Summary of Conclusions” of the Royal Commission of 1879 will suffice :—

“That the tenement houses of Dublin, according to the medical evidence so voluminously tendered at our inquiry and embodied in this our Report, appear to be the prime source and cause of the exces-

sively high death-rate. That they are not properly classified, registered and regulated ; that they are dilapidated, dirty, ill-ventilated, much overcrowded, and that disease, a craving for stimulants and its consequences—drunkenness and extreme poverty, are thereby fostered, and that until the condition of these houses shall have been improved, the general health of the city will continue to be injuriously affected.”

Notwithstanding all that has been done since—in spite of a better system of inspection and regulation—in spite of all the clearances that have been made, and the number of new dwellings that have been built by the Corporation, the Artisans’ Dwellings Company, and others, these sentences are as true in 1892, as they were when they were reported to Her Majesty the Queen by Sir Robert Rawlinson and Dr. M‘Cabe in 1880.

We are justly proud of the good work that has been done with so much public spirit by the Artisans’ Dwellings Company. We warmly approve the measures which have been taken by the Public Health Committee and the Corporation in the endeavour to cope with the difficulty, and especially the hearty co-operation and support which they have accorded to the Artisans’ Dwellings Company and other agencies which have been working in the same direction. The work that has been done is good work, and, as far as it has gone, has in a large degree effected its purpose ; but all that has been done as yet bears but a small proportion to that which remains to be done. Meanwhile the existing houses, though in many ways under better regulation, have been structurally decaying and substantially going from bad to worse, leaving the average but little better than before.

In 1879 there were in Dublin, according to the evidence of the Secretary of the Public Health Committee, 9,760 tenement houses—that is, houses containing more than one family—and, taking the average number of inhabitants at twelve to

each house, he estimated the total population of those houses at 117,120. A careful survey made by Sir Charles Cameron in 1882 showed 7,234 tenement houses, containing 48,116 rooms, and occupied by 32,202 families. At the same average of persons to a family as that of the general population of the city, which, according to Sir Charles Cameron's report, then contained 54,725 families in a total population of a little over 250,000, these 7,234 houses must have contained very nearly 150,000 persons, or fully twenty persons to a house, instead of twelve.* Since that time, I am informed by Sir Charles Cameron, some 350 tenement houses have been closed and detenanted, but as in the same time a large number of single family residences have been degraded into tenement houses, it is doubtful whether the total number is not, even now, rather increasing than diminishing. Besides these 7,000 tenement houses, there were,

* The Census returns for 1891 show that almost exactly two-thirds of the population of the City of Dublin were living in houses containing more than one family.

There were in all 25,764 houses, containing 51,851 families, in a population of 245,001, giving an average of 4·73 persons to a family, and 9·51 to each house.

These 51,851 families were distributed as follows :—

CLASS.	SINGLE HOUSES.		TENEMENT DWELLINGS.	
	Houses.	Families.	Houses,	Families.
First-class houses, --	4,694	4,694	4,020	20,382
Second ,, --	10,289	10,289	4,349	13,753
Third ,, --	2,281	2,281	118	261
Fourth ,, --	7	7	—	—
Workhouses, barracks, &c.	—	—	6	184
	17,271	17,271	8,493	34,580

in 1882, some 6,000 dwellings, inhabited by only one family each, described in the report as "small houses, back houses, and cottages," of which it is certain that a large number were, from various defects, grossly unsuitable for healthy occupation. Altogether it is safe to say that we are within the mark if we assume that there are still in Dublin 7,000 dwellings, with a population of 140,000 persons, such as no decent working-man, with a proper sense of self-respect and a due regard for health, would willingly bring up his family in. Irrespective of all other defects—and they are many—the mere existence in the tenement houses of a common hall and staircase, which it is no one's business to keep clean, and which, in point of fact, never are kept clean, and the want of separate closet accommodation and separate water supply, render these tenement houses unfit for decent or wholesome habitation, and the wonder is not that the health of the city is low, but rather that the health and the morality of our people are not far worse than they are.

The Artisans' Dwellings Company have now within the city 1,562 dwellings, occupied by more than 7,000 persons. The Corporation new dwellings are occupied by about 850 more. Taking into account the work of Lord Iveagh's trustees, and what has been done by some large employers of labour in providing improved dwellings for their work-people, it is probable that some 12,000 to 15,000 persons have been, or will soon be, housed in single dwellings, furnished with the requirements for healthful lives and decent surroundings. That is to say: in fifteen years since the passing of Lord Cross's Act, we have re-housed, in accordance with sanitary principles, 15,000 persons out of 150,000. How long will it take to re-house the remainder? This is the problem which, in its gigantic magnitude, lies before us. I

have merely stated it, and do not pretend to solve it; but on its solution depends the health and prosperity of our city in the future. It will not do to wait—the problem will not solve itself. The houses are actually falling. Material decay is going on at a rate which is converting vast spaces of the city into a desert. In the whole area between the southern side of Christchurch-place on the north, and St. Patrick's Cathedral on the south, and between Bride-street on the east and Patrick-street on the west, it is no figure of speech to say that there is not a decent house—hardly a safe one. Large numbers have been “detenanted” by order of the Public Health Committee, and most of these have been pulled down, leaving only vacant spaces or heaps of rubbish. In the whole city, between August, 1879, and December, 1890, 2,556 houses and 758 cellar dwellings were thus detenanted and closed as unfit for human habitation; and the process is still going on, and would go on even more rapidly were it not for the want of houses for the inhabitants to remove to. Closing old houses without providing new ones, overcrowds those that remain, and only postpones and aggravates the difficulty.

I am not much in favour of large schemes of house-building to be undertaken by the Corporation. The construction of a certain number of model dwellings showing what such dwellings ought to be, may be very well; but, on the whole, in my judgment, the duty of the Public Authority is to regulate and supervise, rather than to construct and manage, and by undertaking the one they weaken their position with regard to the other. But whether by public action or by private effort the difficulty must be met and overcome, if Dublin is to take her proper place as “a city of habitation,” and large sections must be rebuilt. I cannot conceive a

purpose to which any public-spirited capitalist, desiring to bequeath his name to posterity as a benefactor to the capital city of his country, could better devote his wealth than that of extending on some large scale the work of the Artisans' Dwellings Company, particularly as the capital need not be given away ; but would continue to be reproductively invested.

One duty in relation to this work, undoubtedly and conspicuously falls on the City Government—to see that re-construction is not allowed to be carried out at haphazard ; but with due regard to general plan, and with adequate preservation of open spaces.

It will be a permanent injury and a disgrace to the city if the opportunity now afforded by the recent "clearances" on the Bull-alley area, already referred to, between Bride-street and Patrick-street, be not taken advantage of to secure for the district a sufficient open space for public recreation ground, as well as a due widening and improvement of the streets by which it is bounded.

Nothing that I have said as regards the unhealthy dwellings of the city applies with less force, except in degree, to the suburban townships. In these there are to be found, calling just as loudly for amendment, characteristic specimens of every kind of evil to which I have referred. There is the less excuse for the continuance of such evils in the townships, because most of them are growing both in population and in wealth, and in all of them the insanitary portions bear a much smaller proportion to the whole, and could, therefore, be dealt with at much less burdensome cost. On the other hand, the constriction of the city boundary forcing its natural increase to flow over into the surrounding

townships, leaves the central canker unrelieved by any new growth which might ameliorate the average condition of the whole and mitigate the burden of improvement. Within the city limits the process of deterioration tends to outgrow all natural tendencies towards improvement, and forces us to concentrate our attention on the city, leaving the similar evils in the suburban townships out of consideration for the present.

The Dublin Sanitary Association, in the course of its twenty years' labours, has outlived many misconceptions. It is long since we have been suspected of any political or party spirit, such as was at first attributed to us, or of being actuated by any motive save a desire to promote the public good ; but there are still, I am sorry to say, some who look on us as unpractical enthusiasts endeavouring to force on the public acceptance, utopian "fads," unrealizable unless in some visionary "City of Hygeia." It has been my aim, in the three addresses, which, as President of the Association, I have been called on to deliver to you, to endeavour to dispel this misapprehension. I have tried to show that the work of the Association in the past has been based on sound general principles, and that it has been conducted in a reasonable spirit and by practical means, adapted to the actual conditions which surround us. The record of that work shews, I think, sufficient of good results accomplished to fully justify our aims, and to recompense our exertions in the past, and entitles us to look to the Public for its confidence and for such liberal support as will enable us to carry on the work that still lies before us in the future, with undiminished energy and determination.

